

# **BRITAIN'S ROLE IN U.S. MISSILE DEFENSE**

**Jeremy Stocker**

**July 2004**

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>JUL 2004</b>		2. REPORT TYPE <b>N/A</b>		3. DATES COVERED <b>-</b>	
4. TITLE AND SUBTITLE <b>Britain's Role in U.S. Missile Defense</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Strategic Studies Institute United States Army War College 122 Forbes Avenue Carlisle, PA 17013-5244</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release, distribution unlimited</b>					
13. SUPPLEMENTARY NOTES <b>The original document contains color images.</b>					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>UU</b>	18. NUMBER OF PAGES <b>64</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

\*\*\*\*\*

The views expressed in this report are those of the author and do not necessarily reflect the official policy or position of the Department of the Army, the Department of Defense, or the U.S. Government. This report is cleared for public release; distribution is unlimited.

\*\*\*\*\*

This manuscript was funded by the U.S. Army War College External Research Associates Program. Information on this program is available on our website, *http://www.carlisle.army.mil/ssi/*, at the Publishing button.

\*\*\*\*\*

Comments pertaining to this report are invited and should be forwarded to: Director, Strategic Studies Institute, U.S. Army War College, 122 Forbes Ave, Carlisle, PA 17013-5244. Copies of this report may be obtained from the Publications Office by calling (717) 245-4133, FAX (717) 245-3820, or by e-mail at *SSI\_Publishing@carlisle.army.mil*

\*\*\*\*\*

All Strategic Studies Institute (SSI) monographs are available on the SSI Homepage for electronic dissemination. SSI's Homepage address is: *http://www.carlisle.army.mil/ssi/*

\*\*\*\*\*

The Strategic Studies Institute publishes a monthly e-mail newsletter to update the national security community on the research of our analysts, recent and forthcoming publications, and upcoming conferences sponsored by the Institute. Each newsletter also provides a strategic commentary by one of our research analysts. If you are interested in receiving this newsletter, please let us know by e-mail at *outreach@carlisle.army.mil* or by calling (717) 245-3133.

ISBN 1-58487-163-6

## FOREWORD

U.S. plans for missile defense have been a contentious issue in transatlantic relations for nearly 40 years. Notwithstanding the recent focus on events in Iraq, ballistic missile defense (BMD) remains a significant part of American defense policy, and an aspect that continues to generate interest and concern abroad. At the same time, U.S. allies have potentially important roles to play in American missile defense and have developing requirements of their own.

This monograph, by Dr. Jeremy Stocker, seeks to examine the many facets of the role that Britain, America's closest and strongest ally, plays in missile defense, and to identify the ways in which disagreements can be minimized and cooperation enhanced, to mutual benefit.

DOUGLAS C. LOVELACE, JR.  
Director  
Strategic Studies Institute

## BIOGRAPHICAL SKETCH OF THE AUTHOR

JEREMY STOCKER is Director of Studies at the Centre for Defence and International Security Studies (CDISS), a British independent defense think tank. He served in the Royal Navy for 20 years, specializing in air defense, before transferring to the Royal Naval Reserve in 1996. Dr. Stocker is the author of *Britain and Ballistic Missile Defense 1942-2002* (London: Frank Cass, 2004), and is a regular contributor to academic and professional journals on both sides of the Atlantic.

## SUMMARY

Despite the apparent novelty of the subject, defense against ballistic missiles has been a persistent topic in transatlantic relations for over half a century. In particular, America's European allies, especially Britain, have frequently been concerned by the wider implications of U.S. repeated efforts to develop and deploy missile defenses.

The end of the Cold War has completely altered the strategic circumstances within which ballistic missile defense (BMD) policy is formulated, while technological developments are making effective defense more feasible. However, the subject retains a large historical legacy of attitudes derived from earlier times and has lost little of its controversy.

Britain has a particular role to play in U.S. BMD plans, beyond its long-standing status as America's most important ally. The United Kingdom is host to one of three Ballistic Missile Early Warning Stations (BMEWS) and to the European ground station for the Space-Based Infra-Red System (SBIRS), both vital elements in U.S. missile defense architecture. Britain also has a long record of technological cooperation in missile defense.

However, British Governments have consistently taken a different view on the nature and severity of the ballistic missile threat, and on the appropriate means by which to deal with missile proliferation. The UK is generally sceptical about the technological promise of active defense, heavily constrained by limited defense resources, and has a greater attachment than American governments to other means of nonproliferation.

Tactical defense against shorter-range missiles is now regarded as uncontentious, though also unfunded. In regard to strategic homeland defense, Britain does not regard itself as under a ballistic threat other than the long-established Russian and Chinese rocket forces. Continued adherence to diplomatic means and established deterrence postures is the preferred method of dealing with those capabilities. Britons do not share American concerns about North Korea, and are not prepared to view China as a long-term strategic competitor requiring a BMD response.

The UK is not prepared, however, to let disagreements over missile defense prejudice the two countries' wider security relationship. It is also progressively shedding many of its previous concerns about the wider consequences of missile defense deployment and gaining a better appreciation of the advantages of collaboration in both the policy and technical fields. For America's part, an understanding of the UK's stance and a willingness to engage in honest and forthright consultation are essential if the United States is to maximize the advantages of international cooperation in missile defense and avoid some of its penalties.

Despite a recent focus on events in Iraq, missile defense remains a vital issue in U.S.-British relations and a subject of considerable intrinsic importance. Both countries need to better understand each other's policies and concerns, and cooperate in providing effective and appropriate defense capabilities.

# BRITAIN'S ROLE IN U.S. MISSILE DEFENSE

## Introduction.

The end of the Cold War, and with it the demise of the West's common foe, the Soviet Union, has put transatlantic security relations on a new and less sure foundation. A junior defense minister in Britain stated recently that, "... the UK and the U.S. have largely shared security interests."<sup>1</sup> Those interests are not identical, however, and nor are the strategic cultures, threat perceptions, and political policies that underlie them. James Steinberg suggests that, just when Europe is seeing the end of a century of bloody conflict, America, after September 2001, is feeling a new vulnerability to violence.<sup>2</sup>

Both the United States and the United Kingdom are Atlantic nations. But the United States is also a Pacific nation and the UK, a European one. However close the two countries remain, there can never be a complete coincidence of security perceptions or interests.<sup>3</sup> While the Anglo-American "Special Relationship," as demonstrated by the war in Iraq, appears to be as strong and as close as ever, important security issues do separate the United States and its principal ally, the United Kingdom.

As the world's sole remaining superpower, the United States operates on a scale, both geographic and military, that is quite without peer. But it is not omnipotent. "Even Mr. Big needs friends,"<sup>4</sup> a basic geostrategic truism seemingly well-understood on both sides of the Atlantic. But without the strategic "glue" provided by the Soviet threat, the potential for damaging political differences is clearly increased.<sup>5</sup>

A recent SSI study identified two possible causes of friction. One is the growing European Security and Defense Policy (ESDP) and another the Ballistic Missile Defense (BMD).<sup>6</sup> Nothing like the widespread American consensus in favor of missile defense is to be found in Europe, not even in Britain, the most maritime and insular of European countries.<sup>7</sup> The implications for transatlantic relations of U.S. missile defense ambitions have been a subject of prominent debate in Europe since the Clinton administration's limited National Missile Defense (NMD) plan became prominent in about 1998. Some



commentators have warned that the effect of U.S. BMD on its key allies could represent a net loss of security to the United States.<sup>8</sup>

One irony surrounding missile defense is that, following the election of President George W. Bush, much more committed than his predecessor to active defense, some of the heat has gone out of the debate. European governments in general, and Britain in particular, have become largely reconciled to the prospect of widespread BMD deployment. That does not mean, however, that the issue has gone away or lost any of its intrinsic importance to transatlantic relations. "Outright opposition has been replaced by penetrating enquiries about the purpose, extent, and means of missile defences."<sup>9</sup> For Americans' part, though a greater awareness of the international dimensions of BMD exists, the policy debate has been largely conducted in a domestic context, despite it being self-evidently a matter of international security.<sup>10</sup>

The relevance of Britain's missile defense policy for the United States is two-fold. First, BMD is a major issue of international security, and the UK is America's most important ally. Second, building on an extensive history of missile defense cooperation, Britain and the United States have important, even vital, roles to play in each other's BMD efforts. Successful policymaking on both sides of the Atlantic will be aided by a better understanding of the other's attitudes, interests, and policies with regard to combatting the proliferation and potential use of ballistic missiles, without either country expecting that it can or should exercise a power of veto over the other.<sup>11</sup>

### **A Rich Historical Legacy.**

As Professor Colin Gray observes, "Europeans have been an interested audience for the succession of debates over missile defense that Americans have conducted among themselves for 40 years."<sup>12</sup> This is especially so in the United Kingdom, which was the world's first country to come under sustained ballistic missile attack in 1944-45. Defense against ballistic missiles has been a persistent, if highly variable, topic of policy deliberation and technical investigation ever since.<sup>13</sup>

Wartime plans to develop a gun-based defense of London against German V-2 rockets were never implemented. This was largely due to the cessation of attacks in March 1945 as Allied ground forces drove the Germans back beyond the restricted launch range (200 miles) of the V-2. By then, a limited early warning system had been implemented, based in part on American-supplied radars which were used for impact-point prediction. Similar arrangements were devised by the U.S. Army for the port of Antwerp in Belgium.<sup>14</sup>

During the 1950s, extensive Anglo-American technical cooperation included active defense against the rapidly developing Soviet missile capability. In the United States these efforts were led by the Army, whose development of the *Nike*-series of surface-to-air missiles eventually resulted in the *Safeguard* Anti-Ballistic Missile (ABM) system. Similar British plans to adapt the *Bloodhound* missile were abandoned in the early 1960s on technical and cost grounds.<sup>15</sup> Thereafter British policy relied, to an even greater extent than did American, on the deterrent threat of nuclear retaliation.<sup>16</sup>

Since the mid-1960s, therefore, British attitudes and policies towards BMD have been directed mainly towards other states' missile defenses, rather than the UK's own. In 1961, a major Ministry of Defence (MoD) study made a judgement that:

. . . if no decoys are present then the problem of intercepting and destroying the enemy warhead is solvable with existing techniques . . . [but] active defence founder[s] on the problem of providing an economic system in the presence of artificial decoys accompanying the warhead.<sup>17</sup>

Despite this view, British policymakers became increasingly concerned by the effect that defenses, if deployed by the superpowers, might have on the credibility of Britain's own small, independent nuclear deterrent, on prospects for international arms control agreements, and for a condition of stable, mutual nuclear deterrence. This has been an enduring historical legacy.

British governments have had to respond at a policy level to U.S. missile defense plans on at least four occasions. During the 1960s, the Lyndon Johnson administration was pushed (reluctantly) towards a limited ABM deployment, which was announced to the world by

U.S. Defense Secretary Robert McNamara on September 18, 1967.<sup>18</sup> The British Labour Government was consulted extensively in advance, but remained convinced “. . . that the development of anti-ballistic missile defensive systems would give a new impetus to the nuclear race . . .”<sup>19</sup> Of particular concern was a judgement that ABM defences “. . . raise doubts about the credibility of the French and United Kingdom strategic nuclear forces.”<sup>20</sup> Just prior to McNamara’s speech, UK Defence Secretary Denis Healey wrote to him that “I know with what regret you have been compelled to take this decision . . .,”<sup>21</sup> sentiments that would be echoed over 30 years later as the Clinton administration (again reluctantly) considered a new missile defense deployment.<sup>22</sup>

Richard Nixon replaced Johnson in the White House in January 1969, much more committed than his predecessor to ABM deployment.<sup>23</sup> Britain was the only foreign country informed in advance when the previous *Sentinel* system was reoriented to a new *Safeguard* defense of missile silos.<sup>24</sup> As this would strengthen, rather than undermine, deterrence, *Safeguard* aroused less concern in London than had its predecessor. Moreover, by about 1970 it was becoming clear that ABMs would be the subject of arms control limitation, further assuaging British worries.

Following the signature of the ABM Treaty in 1972, missile defense faded from the political landscape, especially in Europe. The subject was not dead, however, and BMD research continued in both the Soviet Union and the United States, in the latter case with funding of between \$100 and \$200 million per year.<sup>25</sup>

When President Ronald Reagan made his now-famous speech on March 23, 1983, he outlined a new vision that would “. . . break out of a future that relies solely on offensive retaliation for our security . . .”<sup>26</sup> Though Reagan’s long-term aim was a near-perfect defense that would make nuclear weapons obsolete, in practice his administration pursued a Strategic Defense Initiative (SDI) that would enhance, rather than replace, deterrence.<sup>27</sup> Reagan’s speech was a surprise to Allied governments, who had not been consulted in advance. Initially, however, the British reaction was muted. Professor Lawrence Freedman believed that: “The basic hope was that as the announcement had so obviously slipped through the

policy filter, the machine would now correct the mistake and the plan would soon die without trace.”<sup>28</sup>

However, by early 1984 Reagan had been elected for a second term, and the Strategic Defense Initiative Organization established (SDIO). SDI was here to stay. The British approach was to avoid open disagreement with its principal ally, while seeking to influence American policy behind the scenes. Prime Minister Margaret Thatcher’s personal relationship with Reagan played a key role. British policy was governed by four principles: the scientific possibilities; existing arms control agreements, especially the ABM Treaty; Soviet progress in the field; and SDI’s implications for deterrence.<sup>29</sup>

Following a Camp David meeting between the two leaders in December 1984, a four-point agreement was announced which became the basic statement of policy for all interested Allied governments:

- the U.S., and Western, aim is not to achieve superiority, but to maintain balance, taking account of Soviet developments;
- SDI-related deployment would, in view of treaty obligations, have to be a matter for negotiation;
- the overall aim is to enhance, not to undercut, deterrence;
- East-West negotiation should aim to achieve security with reduced levels of offensive systems on both sides . . . <sup>30</sup>

British policy towards SDI remained, at best, ambivalent, as expressed by Foreign Secretary Geoffrey Howe in March 1985: “Deterrence has worked, and it will continue to work. It may be enhanced by active defences. Or their development may set us on a road that diminishes security . . .”<sup>31</sup> Behind the scenes, senior officials were more forthright. One described it as “dangerous moonshine.”

Britain’s position was complicated by a U.S. invitation to allied nations to participate in SDI research. This would give the SDIO access to some specialized areas of expertise in other countries, and, at a political level, help to “buy” support for a controversial project.<sup>32</sup> For Britain, participation might lead to useful technological “spin-offs,” gain lucrative contracts for UK industries and research institutions, and provide important insights into the wider

implications of SDI, especially for the future credibility of the UK nuclear deterrent. The British Government was the first to sign an SDI Memorandum of Understanding (MoU), on December 6, 1985.<sup>33</sup> The value of contracts actually awarded to Britain fell far short of expectations, amounting to about \$100 million by 1990. Most related to Theater Missile Defense (TMD) aspects, rather than the more ambitious homeland defense programs.

By the end of the 1980s, SDI participation had achieved one of its objectives—gaining insight into SDI’s potential. British officials increasingly became convinced that SDI did not offer sufficient technological promise to undermine nuclear deterrence for the foreseeable future.<sup>34</sup> Moreover, the Cold War was coming to an end, and Reagan’s SDI vision was being overtaken by events elsewhere.

The first Bush administration instead planned a more modest Global Protection Against Limited Strikes (GPALS). Allied participation and consultation continued much as before, and GPALS’s much more restricted scope aroused little controversy. It too, was overtaken by political events when William Clinton became President in January 1993. “For the third time in four decades, strategic missile defence had come and gone as a major issue.”<sup>35</sup>

## **National Missile Defense.**

Missile defense did not end with the Cold War, however. Instead, it was reoriented to meet new “theater” requirements, mainly as a result of the spectacular use of Al-Hussein Scud-derivatives by Iraq in 1991. TMD became the main focus of the Clinton administration’s missile defense efforts during the 1990s. It included defense of regional allies against shorter-range threats as well as the protection of U.S. forces deployed overseas. A development program for a limited defense of North America, now called National Missile Defense (NMD), remained largely in the background.<sup>36</sup> It was given new impetus when the Republicans gained control of Congress, and the subsequent publication of the report of the Rumsfeld Commission in July 1998.<sup>37</sup>

The administration’s (somewhat reluctant) development of NMD initially passed largely unnoticed in Europe. When NMD became a topic of public discussion in the United States in 1998, the

British Government, like most in Europe, was quite unprepared for a revival of the missile defense debate. The strategic issues to which NMD was addressed were not on the policy agenda in Europe, and the very notion of missile defense revived all the old worries.<sup>38</sup> These included its effects on “strategic stability” (a concept rarely defined), arms control (especially the ABM Treaty), and relations with Russia. It was also viewed as an expensive and disproportionate technological response to a modest political problem (North Korea). Many officials and commentators alike doubted that missile defense could work, seeing it still in absolute, Cold War terms (any defense, to be effective in the face of a large-scale nuclear threat, had to be near-perfect). Others worried that, if it did work, only North America, but not Europe, would be protected resulting in a decoupling of the Atlantic Alliance.<sup>39</sup>

There also lurked a suspicion that NMD’s real agenda was China, not North Korea,<sup>40</sup> which raised a whole new set of questions about relations with East Asia’s giant. As one British journalist put it, “. . . you don’t spend that kind of cash for one or two North Korean missiles.”<sup>41</sup>

NMD’s impact on transatlantic relations was not helped by a perceived lack of consultation. This was perhaps because U.S. officials knew that the European response would be negative anyway, and in the short term NMD’s focus was Northeast Asia, not Europe or the Middle East. Clinton was embarking on NMD half-heartedly, and was therefore disinclined to “sell” it abroad.<sup>42</sup> In Europe it was widely expected (and hoped) that, like ABM, SDI, and GPALS before it, NMD would never actually be deployed.<sup>43</sup>

Official reaction was muted but essentially hostile, and one junior Foreign Office Minister went so far as to say, “I don’t like the idea of a Star Wars programme, limited or unlimited. Unilateral moves by Washington would be very damaging.”<sup>44</sup> A report by the House of Commons Foreign Affairs Committee expressed a widely (though not universally) held view, that: “We are not convinced that the U.S. plans to deploy NMD represent an appropriate response to the proliferation problems faced by the international community.”<sup>45</sup>

NMD posed a real dilemma for the British Government. On the one hand, the close defense and intelligence links with the United States continued to be highly valued, and overt disagreements about



missile defense could prejudice them. On the other, there were genuine doubts about the technical feasibility and strategic wisdom of active missile defense, and a desire to be “good Europeans” in defense matters.<sup>46</sup> It was, therefore, with some relief that the government greeted Clinton’s announcement that he was deferring a deployment decision for his successor to take, citing Allied concerns as one of his reasons.<sup>47</sup>

## **The ABM Treaty.**

The 1972 ABM Treaty was a consistent and important factor in British attitudes towards missile defense throughout its 30-year life.<sup>48</sup> Though Clinton’s NMD plan was designed to be as closely treaty-compliant as possible, any missile defense deployment would have clear implications for the future of the treaty. The formal British position was that “Her Majesty’s Government takes the view that the ABM Treaty is essentially a bilateral issue for the U.S. and Russia, and that its future is a matter for them.”<sup>49</sup> However, despite not being a signatory to the Treaty, it was of profound importance to the entire strategic posture of the United Kingdom. In December 2000, Defence Secretary Geoff Hoon stated that “. . . we continue to value the strategic stability that the treaty provides. We want to see it preserved.”<sup>50</sup>

Despite the end of the Cold War, the perennial considerations still applied. The ABM Treaty underpinned all other strategic arms control agreements and was vital in ensuring the continued credibility of the UK’s small nuclear deterrent. Any unilateral abrogation of the Treaty would, it was feared, lead to a breakdown in relations with Moscow and, if not a renewed Cold War, at least greater tensions in Europe. If the United States was determined to go ahead with a missile defense deployment, a treaty amended to permit NMD or something like it was preferable to the end of the treaty altogether.<sup>51</sup>

The election of George W. Bush to the White House made it clear that the ABM Treaty’s days were likely to be numbered.<sup>52</sup> On December 13, 2001, Bush announced that agreement on treaty amendment could not be reached with Moscow, and that the United States was giving the required 6 months’ notice of withdrawal. The

British Government therefore had to quickly come to terms with the new situation and the loss of a previously valued diplomatic instrument. This proved easier than might have been expected. Despite earlier concerns, it did not prove to be a “foreign policy disaster,”<sup>53</sup> for the U.S. Government or any other. Nor did it prompt an “acute and all-embracing crisis.”<sup>54</sup>

This was rationalized by a Public Discussion Paper issued by the MoD in December 2002:

The suggestion that missile defence would spark an arms race . . . needs to be taken seriously. It is possible that states in the process of developing long-range missile capabilities would seek to intensify these efforts in an attempt to overcome any defences. On the other hand . . . it is perhaps more likely that missile defence would succeed in dissuading countries from taking this ever more difficult and expensive path. Many feared that U.S. withdrawal from the Anti-Ballistic Missile Treaty (ABMT) . . . would cause global instability, damage international relationships and create an arms race. But this has not happened.

Although the UK welcomed the stability brought by the ABMT to the Cold War stand-off, it is important to recognise that it is the stability which is important, not the mechanism by which it is achieved.<sup>55</sup>

The paper went on to note that U.S. withdrawal from the ABM Treaty had been accompanied by the Moscow Treaty further *reducing* Russian and American offensive nuclear missiles, and that missile defense was a response to, not a cause of, missile proliferation.

There was no explicit acknowledgement that previous fears for the consequences of Treaty abrogation had been misplaced or overstated. But senior government ministers soon gave evidence of what a dramatic change in thinking had been forced upon them by the end of the ABMT. As early as February 2002 the Foreign Secretary opined that the Treaty “. . . was a product of its time . . . But the world has changed.”<sup>56</sup> He even, and somewhat disingenuously, stated that:

It is slightly ironic that the implication, as in the past, of people saying that they refuse to discuss missile defence is that they fall back on the old doctrine of mutually assured destruction, which was exactly the doctrine that many of us opposed when it was proposed. Had there been missile defence then, we would have been in favour of it.<sup>57</sup>



The end of the ABM Treaty had one immediate consequence for America's allies. Its demise meant that not only was testing and deployment now unconstrained by its provisions, but missile defenses could be shared with others.<sup>58</sup> The evident determination of the Bush administration to push ahead with deployment, and its offer to extend protection to friends and allies, put the missile defense debate on a wholly new footing.

### **The Bush Missile Defense Plan.**

Soon after Bush came to power, British Prime Minister Tony Blair described the missile defense issue as "Handle With Care."<sup>59</sup> The new American President had already promised that, if elected, he would ". . . build effective missile defenses, based on the best available options, at the earliest opportunity."<sup>60</sup> The respite, as many Europeans saw it, brought about by Clinton's deferral of a deployment decision therefore was only temporary.

Bush's election did not, however, lead to an immediate decision to deploy the limited NMD system which Clinton had postponed, not least because the system (now renamed the Ground-Based Midcourse Defense System (GMDS)) was still in development. Instead, Bush's new Defense Secretary, Donald Rumsfeld, ordered a thorough review of all BMD systems, much as Richard Nixon had done on coming to power over 30 years earlier.

One immediate consequence of this review was that the National/Theater distinction was scrapped: "What's 'national' depends on where you live, and what's 'theater' depends on where you live."<sup>61</sup> Instead, U.S. missile defense plans would be defined in terms of the phases of a missile's trajectory—boost, mid-course and terminal-phase—rather than the nature of its target—national or theater. With a commitment to engage all missiles in all phases, this made some sense. The new approach, however, does blur the still valid distinction between defense of the homeland and defense of deployed forces (strategic versus tactical defense), just when that difference was becoming understood in Europe. Though National (or North Atlantic Treaty Organization [NATO]) missile defense remains controversial, theater or tactical defense of expeditionary forces largely has become uncontentious. The new U.S. approach,

therefore, tends to tar all missile defenses with the same brush, making even TMD systems potentially more difficult to acquire.

A further related difficulty is the sometimes exaggerated rhetoric used by advocates of missile defense in the United States. While aimed at a domestic audience, it is heard further afield and can, ironically, provide ammunition to BMD's most strident and vociferous opponents. A particular culprit in this regard is the U.S. Air Force Space Command, whose website and doctrine publications are routinely cited by organizations opposed to missile defense as evidence of the malign purposes behind BMD.<sup>62</sup>

Bush's determination to provide for missile defense of the national territory was given added impetus by the terrorist attacks on New York and Washington in September 2001.<sup>63</sup> This reinforced European views on the inevitability of missile defense deployment. As Colin Gray puts it, ". . . that homeland defense is now a hardy perennial among American strategic desiderata, virtually regardless of wider considerations, has come to be accepted in Europe as a fact of trans-Atlantic political life."<sup>64</sup> American policies by now had forced many European governments, especially the British, to examine the issue more closely. While the extent of missile proliferation became increasingly apparent, the end of the ABM Treaty also demonstrated that many of the fears about its demise were ill-founded.

The British Foreign Office stated that one of its objectives in its relationship with the United States was to ensure that ". . . Missile Defence is pursued in a way which protects UK interests and minimises divisions within NATO."<sup>65</sup> How far British thinking has moved on was shown by a statement from the new Foreign Secretary, Jack Straw: ". . . we in this country have long recognised the case, in appropriate circumstances, for measures of missile defence."<sup>66</sup> He added that: "There is an overwhelming case for missile defence in principle . . . Our view is that the United States is fully entitled to want to develop systems of missile defence."<sup>67</sup> This is a dramatic, if little-noticed, shift in British official thinking which since the 1960s had consistently viewed missile defense as destabilizing. By no means were all public figures convinced, however, as one Labour backbencher asked the government about the "first-strike" potential of missile defense.<sup>68</sup> But by early 2002 the British Government, if not

all its supporters or the general public, had become fully reconciled to the prospect of a limited missile defense of North America.

The debate in Europe, and especially in Britain, has therefore moved on from “whether” to “when” and “how” missile defenses are to be deployed.<sup>69</sup> This process has been aided by the readiness of the present U.S. administration to consult its allies in a way that its predecessor appeared not to. The ability of the U.S. Government to secure further offensive arms reductions with the Russians also met another consistent European objective. Working against this trend, however, has been what is perceived as evidence of American unilateralism in regard to other international treaties such as the Comprehensive Test Ban Treaty, the International Criminal Court, and the Kyoto Climate Change Protocol. Though many of these issues do not impinge directly on missile defense, they do, in many eyes, indicate a U.S. willingness to act in defiance of the “world community.” To some extent, fears that missile defense will not work have been replaced by fears that it will, thereby allowing the United States even greater freedom to act unilaterally, heedless of the wishes and interests of others.<sup>70</sup>

The British Government’s response to this potential problem is a very traditional one. The only way a “junior” partner can influence a much more powerful country like the United States is to act as a reliable, but not slavish, ally.<sup>71</sup> By making itself both sympathetic and useful, Britain seeks to wield influence. It thus rejects the more strident and independent stance commonly (though not exclusively) associated with France.

Britain also stresses that, whatever the merits of active defense, it can only be one part of a more comprehensive approach, which includes traditional nonproliferation measures such as arms control, and other forms of defense, both passive (a particular strength of Britain’s armed forces) and preemptive counterforce operations (though these are fraught with both legal and tactical difficulties).

Related to this broader approach is a different emphasis in viewing the missile threat. The substantive facts of missile proliferation are no longer in dispute. However, European threat analysis tends to reject “Rogue State” models of irrationality.<sup>72</sup> Countries such as North Korea or Iran are not regarded as any more undeterrable than were Stalin’s Russia or Mao’s China. For Britain

and France in particular, with their own nuclear capabilities, Cold War deterrence norms continue to have more salience than in much of recent American strategic thinking.<sup>73</sup> Nonetheless, the U.S. view that missile defense could enhance the deterrence of “rogue” states does find some resonance in Britain.<sup>74</sup>

There are also important differences in strategic culture:

. . . geography has dictated that for Europeans political intent is all but overwhelmingly important, because some vulnerability to military aggression has been a condition of political existence . . . [but] Americans have had effectively zero experience of geopolitically proximate strategic cohabitation with peer security communities . . .

Americans expect to be safe at home, while Europeans are heirs to an historical experience . . . which more easily finds vulnerability a regrettable fact of life.<sup>75</sup>

What all of this means is that, if Britain (and others) have become largely reconciled to an American deployment of missile defense, they are as yet far from ready to see the need to spend scarce resources on defenses themselves. Therefore, there remains an important difference of outlook on each side of the Atlantic.

But if all America’s ambitions for missile defense are to be realized, allied cooperation is essential.<sup>76</sup> Britain has a key role to play in this.

## **Fylingdales.**

Britain’s interest in U.S. missile defense is not motivated purely by its wider significance for “strategic stability.” While acquiring a defense for the UK itself might not yet be regarded as an urgent priority, the issue of British participation in American defenses has been both pressing and important. Partly because of another historical legacy, British territory is necessarily included in U.S. plans. The subject is not, therefore, one for abstract policy debate as in many other countries.

During the 1950s the United States developed a Ballistic Missile Early Warning System (BMEWS) to provide warning of Soviet attack. Sites I and II were located in Clear, Alaska, and Thule, Greenland

(a Danish dependency). A site was also needed in northwestern Europe, to complete a chain of three. Britain was the preferred site, giving the right coverage and, not being in continental Europe, was considered more secure.<sup>77</sup> The UK also had a national early warning requirement, mainly to give time for its nuclear bombers to get airborne in the event of an attack.

Agreement was reached in 1960,<sup>78</sup> under which the United States supplied and paid for the equipment, while Britain provided a site at Fylingdales in the North Yorkshire Moors National Park, paid for the building work, and subsequently ran the station using Royal Air Force personnel (the other two sites are U.S.-manned). In all, the U.S. Government met 80 percent of the cost of Site III, and 97 percent of the cost of the BMEWS system as a whole.<sup>79</sup> Early warning data is passed to the headquarters of the North American Air Defense Command (NORAD) at Cheyenne Mountain, Colorado, while a Missile Warning Cell at RAF High Wycombe, northwest of London, receives information not just from Fylingdales, but from the entire chain. The agreement met a major UK national requirement and, in financial terms, was a bargain.

The entire BMEWS chain was modernized between 1987 and 1992. The program amounted to almost complete replacement, with the installation of new Solid State Phased Array Radars (SSPARs). The UK Government met roughly 30 percent of the £170 million (\$270 million) cost of the Fylingdales site, the only one to receive, for the first time, 360° coverage.<sup>80</sup> Similar radars were installed at two further sites in California and Massachusetts, though these are not formally part of the BMEWS system.

Up to this time, BMEWS had performed a purely early warning role, mainly in support of U.S. and UK nuclear retaliatory forces.<sup>81</sup> But the evolution of plans for a limited active defense of North America has obvious implications for BMEWS, as it would perform an essential role in alerting other elements of the system.<sup>82</sup> Not only would this require permission from the British Government (noting that the station is operated by UK personnel), but would also be in contravention of Article IX of the ABM Treaty. As the House of Commons Foreign Affairs Committee put it, "The UK is not simply a bystander with regards to NMD."<sup>83</sup>

Until the U.S. Government made a definite decision to proceed with deployment, Britain's official stance was that "We have not received a request from the U.S. regarding the use of facilities in the UK as part of the proposed U.S. National Missile Defence system . . . We would consider such a request carefully, taking account of any implications for UK defence."<sup>84</sup>

The UK Defence Secretary made it clear in March 2000, however, that "The history of our close friendship with the U.S. is such that we are sympathetic to such requests."<sup>85</sup> The role of BMEWS in active defense was the subject of a joint UK/U.S. study.<sup>86</sup> But the immediate importance of Fylingdales to the Clinton administration's NMD architecture was often overstated, as its initial orientation was to be westwards, towards northeast Asia. This was made clear by the Foreign Office:

Without the involvement of the Upgraded Early Warning Radar at RAF Fylingdales, the ability of the proposed system to meet threats to the United States from North Korea would be unaffected. But its effectiveness in meeting threats to the United States from the Middle East would be likely to be significantly impaired.<sup>87</sup>

When Bush replaced Clinton in the White House, therefore, the issue of Fylingdales's future role in missile defense had not been resolved, simply because it did not need to be resolved. It was, nonetheless, a subject of continuing public speculation. Bush's commitment to missile defense made it very likely that, sooner or later, a formal request to use Fylingdales would be received. In anticipation, the British Government issued the Public Discussion Paper already cited, in December 2002. Though it ranged across many BMD issues, a possible upgrade to Fylingdales for purposes of missile defense was its main focus. Confident that a formal U.S. request to include the station in its missile defense architecture was imminent, the paper confirmed that, without both hardware and software upgrades, BMEWS could not provide the data needed for missile defense.<sup>88</sup>

The government restated its position that it would "... agree to a U.S. request for the use of UK facilities for missile defence only if we believe that doing so enhances the security of the UK and the NATO



alliance.”<sup>89</sup> In view of subsequent events, however, it is clear that the decision had, in principle, already been taken. The paper went on to dismiss claims that allowing the use of Fylingdales could make the UK itself a target, and noted that it could be a “key building block” in any future defense of the UK and Europe.

Only a week later, the long-awaited request was received, accompanied by an offer to extend missile defense coverage to the UK “. . . subject to agreement on appropriate political and financial arrangements.”<sup>90</sup> The Americans also proposed a new bilateral MoU covering missile defense research, development, test, and evaluation. The U.S. Government would not have made such a request without first being confident of the answer it would receive, and there had clearly been a process of discussion going on for some time: “The U.S. request to upgrade Fylingdales did not fall like a ballistic missile out of a clear blue sky.”<sup>91</sup> There followed a short period for “public consultation,” during which the House of Commons Defence Committee recommended that

. . . the UK should agree to the upgrade. The factors in favour of that agreement—the importance of the UK-U.S. relationship, the improvement to the early warning capability, the opportunity to keep open the prospect of future missile defence for the UK and the potential for UK industrial participation in the programme’s further development—outweighs the arguments against.<sup>92</sup>

Formal assent to the U.S. Government’s request was given on February 5, 2003.<sup>93</sup> The Defence Secretary was at pains to point the limited terms of this agreement: “The upgrade of the Fylingdales radar can and should be considered as a discrete proposition. It does not commit us in any way to any deeper involvement in missile defence, although it gives us options to do so.”<sup>94</sup> He went on, however, to point out the potential bargain that, once again, Fylingdales offers the UK: “An upgraded radar at RAF Fylingdales would provide us, at no cost to the United Kingdom, with a vital building block on which missile defence for this country and for our European neighbours could be developed if the need arose, and if that is what we decide.”<sup>95</sup>

In view of the public interest in the Fylingdales issue, the MoD commissioned an Environmental and Land Use Report.<sup>96</sup> It concluded

that the upgrade did not pose any environmental or health risks. The cost of the upgrade is reported to be \$111.7 million,<sup>97</sup> though some of the work involved was due to be undertaken anyway as part of a routine upgrade unconnected with missile defense. A detailed agreement on the management and financial arrangements for the work was signed on December 18, 2003, with work to be completed by late-2006.<sup>98</sup>

## **Menwith Hill.**

The BMEWS station at RAF Fylingdales is not the only site on British soil potentially involved in American missile defense. In March 1997 the British Government agreed that the existing U.S. National Security Agency signals intelligence site at RAF Menwith Hill, also in North Yorkshire, could be used for a European Ground Relay Station for the Space-Based Infra-Red System (High) (SBIRS(High)).

There is an historical precedent for this, too. In the early 1960s the United States started development of a satellite-based missile warning system called MIDAS (Missile Defense Alarm System). A ground station was to be located in northwest England, under a similar arrangement to that already agreed for BMEWS. The program faced technological problems which ultimately led to its cancellation in 1963, though research was carried forward into what later became the Defense Support Program (DSP) satellite system.<sup>99</sup>

SBIRS(High) will comprise four geo-stationery satellites and a further two in a highly elliptical orbit, replacing the existing DSP system from around 2006. A second component, SBIRS(Low) will comprise a larger number of low-orbit satellites capable of tracking ballistic missiles after booster burn-out, which the current DSP cannot. SBIRS(Low) will not, however, utilize facilities in the UK.

Like DSP before it, development of SBIRS began independently of active missile defense. The 1997 agreement predated the NMD controversy in Britain, and, as SBIRS(High) simply replaces an existing capability, no doubt seemed uncontentious. It aroused little public interest at the time. However, the potential of SBIRS to contribute to missile defense became apparent at the same time as BMEWS. In July 2000 the British Government made it clear that its



consent would also be required if the ground station at Menwith Hill were to be used for NMD.<sup>100</sup>

Menwith Hill, like Fylingdales, therefore became caught-up within the wider NMD controversy. It has been the object of protests and a spectacular “break-in” by “peace activists” opposed to anything to do with missile defense. Unlike BMEWS, SBIRS has not yet been the subject of a U.S. request to use facilities in Britain for active defense, possibly because of delays in the program. With a clear precedent having been set by Fylingdales, however, it seems highly unlikely that any future request would be denied.

## **British Policy.**

UK policy on missile defense since the end of the Cold War has not simply been a matter of reacting to U.S. policy and proposals. Iraq’s use of 82 Scud-derivatives in 1991 put TMD high on the Pentagon’s priority list, and also had an effect elsewhere. As early as 1994 Britain’s Chief of the Defence Staff stated that “The positioning of long range ballistic missiles in some areas creates a direct threat to Europe and may well to our own country within the next decade or so.”<sup>101</sup> The Defence Secretary confirmed that “We are considering whether there might be a need for a Ballistic Missile Defence system in future.”<sup>102</sup>

The result was an industry-led “pre-feasibility study” (PFS), a contract being awarded to British Aerospace (now BAE Systems) in November 1994.<sup>103</sup> The study examined a range of scenarios involving both “theater” and “national” threats and proposed some possible active defense architectures. The U.S. Army’s Patriot Advanced Capability-3 (PAC-3) and theater high altitude area defense (THAAD) systems, then in development, featured prominently in many of them. Government support was growing, a new Defence Secretary stating in October 1996 that “. . . we need ballistic missile defence . . .”<sup>104</sup> Soon after the PFS was completed, however, a general election altered the prospects for British BMD policies.

After coming to power in May 1997, the new Labour Government embarked on a comprehensive *Strategic Defence Review* (SDR) (somewhat similar to a U.S. *Quadrennial Defense Review* (QDR)), which

was completed the following year. During the review a junior defense minister observed that “. . . the protection of deployed forces is a more immediate concern than the protection of the United Kingdom itself.”<sup>105</sup> Missile defense was not really on the government’s agenda, however, and the SDR almost entirely ignored the subject. While the extent of missile and WMD proliferation was acknowledged, the SDR Report concluded that as defensive technologies were still evolving, “. . . it would be premature . . . to decide on acquiring such a capability.”<sup>106</sup> Britain would, however, participate in ongoing NATO studies and establish a new Technology, Readiness and Risk Assessment Programme (TRRAP) to examine a range of technological issues related to TMD.

The reasoning behind government policy was set out in September 1998:

Notwithstanding the damage that individual ballistic missiles armed with conventional warheads can cause, our assessment is that they do not in themselves pose a sufficiently serious threat to justify specific countermeasures. Put bluntly, there are better ways of delivering high explosive. Our main concern is therefore with ballistic missiles armed with weapons of mass destruction.<sup>107</sup>

Furthermore, nuclear deterrence should continue to suffice in the face of nuclear-tipped threats, so the ballistic threat was refined down to a chemical- or biological-armed one. BMD had “significant resource implications,” which were perhaps the real issue. One defense analyst observed that “the Whitehall debate on the whole ABM [BMD] question is still affected by the negative dynamics of the old . . . controversies of the 1980s . . .”<sup>108</sup>

As the TRRAP research program progressed, and the United States pressed ahead with its numerous BMD activities, TMD increasingly came to be seen as uncontroversial, as a straightforward military requirement competing for funding with many other projects. It is now the responsibility of the Directorate of Equipment Capability (Theatre Airspace) (DEC(TA)) within the MoD’s central, joint organization dealing with future requirements. The imminent acquisition of the *Aster* active homing surface-to-air missile and the *Sampson* Multi-Function Electronically Scanned Adaptive Array (MESAR) radar provides two essential components of a future

TMD capability, though their role is for the moment confined to countering air-breathing threats. Future decisions on TMD will depend on continuing threat analyses and the priority accorded to it. There is, however, an official school of thought that recognizes that the UK cannot do everything, and that BMD may be one field where a conscious decision might be taken to rely upon Coalition (i.e., U.S.) assets.

Labour's reelection in 2001 ensured that there would be no dramatic change in policy towards BMD, despite the vocal advocacy of the opposition Conservative Party.<sup>109</sup> By early 2002, Government policy remained that "there is no significant threat to the UK from ballistic missiles . . . it is still premature to decide on acquiring an active ballistic missile defence capability for either deployed forces . . . or for the defence of the UK."<sup>110</sup> A year later, the Defence Committee defined the essence of the problem:

Missile defence systems are expensive and so far largely unproven, so the debate must include whether the potential benefits to the UK (and to our deployed forces overseas) are sufficient to justify the levels of expenditure which would be required and, in a world of limited resources, whether the money should be spent on missile defence rather than on other areas of defence and security . . .<sup>111</sup>

The 2003 *Defence White Paper* indicated the official thinking was moving on, but that a UK national decision on missile defense was still some way off:

Missile Defence . . . technologies are developing rapidly, [but] missile interceptors and other means of destroying missiles will only be able to deal with a limited ballistic missile threat. They are not a substitute for nuclear or other forms of deterrence. However, the addition of active missile defences may complicate the thinking of an adversary. We . . . will continue to examine, with our NATO Allies, the complex web of strategic issues to inform future political and policy decisions. Active missile defences could provide an option for meeting the threat from WMD and its means of delivery. But we will need to consider the right balance of investment between it, forces for nuclear deterrence, and other deterrent, defensive, and preventive strategies.<sup>112</sup>

Ballistic missile defense is no longer simply a matter for national decisionmaking, however. British participation in North American

defense has already been discussed. At the same time, progress with NATO studies and Bush's offer to extend defensive cover to allies both make future British decisions on BMD likely only in a multilateral context.

## NATO.

The 1991 Gulf War caused NATO to look afresh at missile proliferation. A new Strategic Concept agreed to later the same year identified "... the proliferation of ... weapons of mass destruction and ballistic missiles capable of reaching the territory of some member states of the Alliance."<sup>113</sup> Missile defense has been under continuous study by the Alliance ever since, with Britain playing a leading role.<sup>114</sup> However, "... NATO's track-record on TMD development does not warrant unbridled optimism about the willingness or ability of NATO allies to invest substantial political capital or financial resources in territorial missile defences."<sup>115</sup> Progress has been slow.

From the outset, NATO addressed so-called "theater" threats only, defined as those having ranges of less than 3,500 km. This reflected a U.S./Russian accord that defenses to counter threats below that range were not covered by the ABM Treaty. In European terms, this was a misnomer, as proximity to possible threat origins brought national territories well within range of such missiles. The "theater" threat is therefore also a strategic one.

Another anomaly is that while NATO as an alliance (as opposed to individual NATO countries) did not deploy forces outside Europe, the initial Staff Target issued in 1999 was for defense of deployed forces.<sup>116</sup> Two industry-led feasibility studies began in 2001, aiming to lead to a deployable TBMD capability in 2010. NATO would not itself acquire either weapons systems or sensors, but would provide a Battle Management Command, Control, Communications, and Intelligence (BMC<sup>3</sup>I) capability into which nationally-acquired systems would be "plugged."<sup>117</sup> The Netherlands was the first European country to commit to a lower tier BMD acquisition by upgrading its Patriot batteries to PAC-3 standard. Underlying this cautious progress, however, was the essential truth that "Most

Europeans still feel safer today than at any time in 50 years.”<sup>118</sup>

The events of September 2001 in the United States, and the Bush administration’s ambitious plans for homeland missile defense led NATO to consider seriously defense of Alliance territory, and not just deployed forces. The NATO Prague Summit in November 2002 “decided to . . . examine options for addressing the increasing missile threat . . . Today we initiated a new NATO Missile Defence feasibility study to examine options for protecting Alliance territory, forces and population centres against the full range of missile threats . . .”<sup>119</sup>

This new study will report in 2005. Whatever the final outcome, NATO itself will do no more than provide the BMC<sup>3</sup>I infrastructure, probably as part of the new Air Command and Control System (ACCS) which is replacing the existing Air Defence Ground Environment (ADGE).<sup>120</sup> One particular factor complicates NATO’s decisionmaking with respect to BMD. The nature of the threat and the small size of most European states makes a multinational approach the only feasible one. A single command structure, in which there is no time for political consultation, sits uneasily with the existence of several sovereign states, many of whom are likely to continue having sharply divergent views on the nature of the missile threat and appropriate responses to it. This could come to tax Alliance cohesion as much as the war in Iraq or, in earlier times, nuclear strategy.

NATO’s somewhat tortuous progress towards active defense is no longer the only route for a British defense of national territory. Bush’s offer to extend protection to allies has added a new dimension to the issue.

## **Defense of the United Kingdom.**

In July 2002, Bush formally invited other nations, including the United Kingdom, to consider joining the U.S. missile defense program. This did not come as a surprise to the British Government, which had long been engaged in detailed consultations with the United States.<sup>121</sup> There had, for some time, been speculation that the United States might, in addition to asking for the use of Fylingdales, wish to position an X-Band radar and/or ground-based missile

interceptors in the UK as part of its expanded plans for missile defense. If that were to happen, some sort of defensive cover would, as a result both of geography and politics, be extended to the UK.<sup>122</sup>

There are clear advantages for the United States if its key allies were also to be defended in this way. A defended Europe will not be deterred from supporting American interventions around the world by the threat of missile-based retaliation. Assets placed in Europe will play a role not just in defending Europe itself, but also North America (for example, the upgraded Fylingdales radar). "Internationalizing the program would also afford Bush the advantage of blunting the perception of his initiative as simply furthering U.S. strategic hegemony."<sup>123</sup> Finally, if Europe is defended by elements of U.S. missile defense, some financial contribution can be expected.

The question of sharing defense with others is a relatively new one for the U.S. Government, only recently freed from the constraints of the ABM treaty which prohibited such transfers.<sup>124</sup> For Britain's part, The Defence Secretary has been asked:

is . . . the British Government keen to accept the U.S. offer of that [BMD] system being used to protect the people of this country, on the assumption that the system the United States produces is capable of doing that? Is there any reason, in principle, why the United Kingdom would not accept such an offer?

[Defence Secretary] No.<sup>125</sup>

. . . the Fylingdales radar, coupled with some form of interceptor system, ground-based or sea-based, somewhere around north-western Europe, would provide a capability to protect the United Kingdom. If you want a more robust, more layered system and one which is capable of defending a larger tranche of the European continent, then further installations would probably be necessary . . . in other parts of the continent.<sup>126</sup>

This would not come at no cost to Britain. A highly speculative figure of £5-10 billion (\$9-18 billion) was given by the MoD in 2002.<sup>127</sup> This represents expenditure on a scale comparable with other major weapons acquisition projects such as *Trident* or the new *Typhoon* Eurofighter. In the words of the then Chief of the Defence Staff, "There is no way . . . we can pay for any missile defence from within the existing [defense] budget."<sup>128</sup>

Furthermore, the MoD has made it clear that:

The risk to the UK from ballistic missiles—and hence the desirability of coverage by a missile defence system—will be driven by the inimical intentions of other states and improvements in ballistic missile technology and accuracy, and not by the existence of the U.S. missile defence programme.<sup>129</sup>

The missile threat continues to be monitored and evaluated, while at the same time the UK has already conducted modelling and simulation work on possible missile defense architectures. Debris from a successful intercept falling on European allies has already been identified as a significant and “emotive” issue.<sup>130</sup>

Another difficult matter is technology transfer. The constraints of the ABM Treaty have, to some extent, been replaced by a reluctance on the part of many U.S. Congressmen and American defense contractors to share military technologies abroad, even to the extent of undermining export potential.<sup>131</sup> A similar desire to protect U.S. industries underlies the “Buy American” movement,<sup>132</sup> even where overseas companies have something to offer missile defense (such as active phased-array radar technology and missile active seekers). None of these obstacles is insurmountable, but unusually require changes in American, rather than European, attitudes.

### **Missile Defense Cooperation.**

Successive British Governments have a track record of not making firm decisions about missile defense issues until forced to do so. This was true during the ABM and SDI controversies in the 1960s and 1980s, respectively. It was also true in relation to NMD and the Fylingdales upgrade. Bush’s offer in July 2002 to participate in the U.S. program was another catalyst for British decisionmaking. It was followed 5 months later by the formal request to upgrade Fylingdales for missile defense, which was accompanied by a proposal for a new Research, Development, Test, and Evaluation Memorandum of Understanding between the two governments.<sup>133</sup>

This new agreement, which was signed in Brussels in June 2003,<sup>134</sup> replaces the 1985 SDI MoU, under which research cooperation had proceeded ever since. The British government’s objectives in



accepting the U.S. offer, were to gain a “. . . full insight into the development of their [the Americans’] missile defence programme and the opportunity for UK industry to reap the benefits of participation.”<sup>135</sup> These were, in fact, precisely the aims of the 1985 MoU. For the Americans’ part, the SDI-era considerations also still apply: In the view of the UK MoD, an offer of participation by the United States helps to secure political and diplomatic support, or at least acquiescence.<sup>136</sup> The North American subsidiary of the UK-based company BAE Systems has itself joined the U.S. “national team” led by Boeing, the two firms having signed their own MoU.<sup>137</sup>

In the 1980s the SDI agreement was implemented in Britain through an SDI Participation Office within the MoD. This time, a different approach has been adopted. The MoD aims to “establish a lead role in Missile Defence for Europe and a significant role for UK industry in the U.S. Missile Defense program—at the same time as providing advice to MoD Policy staffs.”<sup>138</sup> The result is the establishment of a “virtual” Missile Defence Centre involving UK industry, the MoD and its own research laboratory, the Defence Science and Technology Laboratory (DSTL). The MDC has a “heavy emphasis” on hardware demonstration, and is funded by MoD with a (by U.S. standards extremely modest) budget of about £5 million (\$9 million) per year, in addition to the speculative investments being made by UK companies themselves. In consequence, the UK has a “twin-track” approach, seeking to gain industrial contracts from the United States, while at the same time conducting its own research into technological areas of direct interest to Britain.

The UK offers two particular areas of expertise to the U.S. program. One is radar technology, where Britain has gained an early lead over the United States in active arrays. The U.S. Missile Defense Agency has long been involved in assessments of Britain’s MESAR demonstrator and its operational derivatives.

The other is in defense penetration. Britain remains the only country to have deployed a full operational suite of penetration aids on a ballistic missile. Drawing on earlier American work which was not fully developed, in the 1970s Britain developed and then deployed the *Chevaline* improvement to its U.S.-supplied *Polaris* A3 missiles in order to overcome the Moscow ABM system.<sup>139</sup> After



*Chevaline* became operational in 1982, later to be replaced by *Trident*, the UK continued generic research into defense countermeasures. In recent years the focus of this work has been from the standpoint of the defence, rather than the offence.<sup>140</sup> This experience gives the UK a particular insight into this challenging and controversial aspect of BMD. The British conclusion is “. . . that it is not a trivial matter to deploy decoys in a credible manner and with credible signatures to increasingly sophisticated sensors. We found it a struggle in the 1970s, and sensors today are significantly better.”<sup>141</sup>

Though no longer operational, elements of the *Chevaline* system are in use today to assess the performance of U.S. missile defense radars against targets carrying penetration aids, currently believed to be in development by China.<sup>142</sup>

## Conclusions.

Joseph Nye warns that “The bad news for Americans . . . in the 21st century is that there are more and more powerful things outside the control of even the most powerful state . . . We will have to learn better how to share as well as how to lead.”<sup>143</sup> Martin Aguera believes that “European allies and friends often misunderstand the U.S. interest in [missile defense] as a replay of past debates . . .”<sup>144</sup> As an absolute minimum, Americans need to talk more clearly, and Europeans need to listen more acutely. Britain, in particular, is so closely bound-up with U.S. missile defense that mutual understanding is an absolute precondition for the future of effective and worthwhile BMD and the wider “special relationship.”

The International Institute for Strategic Studies observes that:

Missile defences have not yet seriously affected strategic stability. But . . . layered defences will likely demonstrate significantly greater performance effectiveness . . . In light of these technological prospects . . . and a national security strategy explicitly emphasising preemption, global missile defences seem destined to resurrect concerns about strategic stability.<sup>145</sup>

Deployment of missile defense by the United States, or any other state, does not have to lead to greater instability in international affairs. But whether BMD produces a net gain in the security of the

United States and its allies will depend on the manner in which it is pursued. Defenses developed and deployed by the United States in isolation will be compromised in their utility in both technical and strategic senses. As defense technologies mature and operational systems are fielded, the international dimensions of BMD will gain in salience and require constant and careful attention on both sides of the Atlantic.

Britain's attitude remains ambivalent:

There are complex issues to be considered before the UK and others can determine the best overall strategy for addressing this threat [ballistic missiles], and the role that missile defence could play as an element of this strategy: issues of technology, timescale, international relations, and cost, all of which are closely linked.<sup>146</sup>

But, largely unheralded, a sea-change in official thinking has occurred, for which the end of the ABM Treaty was a major catalyst. The UK's future position on BMD remains uncertain. On the one hand, fears for the implications of U.S. policy have largely been assuaged, and technical cooperation is growing. But cost remains a crushing obstacle to a British active defense capability, no matter how modest. Moreover, the threat may, in the short term at least, be declining. The Iraqi problem has been eliminated. Diplomacy may be solving the Libyan problem. The signs from Iran are ambivalent. Europeans will never fully share American concerns about North Korea. No one even wants to think about missile defense vis-à-vis China (or, for that matter, Russia).

The British approach, which stresses the part active defense can play in relation to other means of countering missile proliferation, such as deterrence and nonproliferation measures, has much to commend it. The American readiness to directly confront security problems, and commit large sums of money to their resolution, is also praiseworthy. Each can, and should, learn from the other.

The gap in transatlantic thinking on missile defense has narrowed. But it has not been eliminated. The mutual dependence in BMD terms of the United States and the United Kingdom, though very far from being a relationship of equals, is increasing. The Anglo-American security partnership remains as important

to both countries as ever. Missile defense is not a “done deal,” and will continue to require careful management by both Britain and America.

## **Policy Recommendations.**

U.S. policymakers should continue to seek Allied participation in the development of U.S. missile defense systems. The result will be more effective than a defensive system developed solely by the United States.

Missile defenses should be deployed in cooperation with Allies. Cooperation will avoid many of the negative diplomatic and strategic side-effects associated with unilateral deployment. However, no Allied government can or should expect to exercise a power of veto over U.S. actions.

Active defense should be pursued not in policy isolation but as part of a wider approach to non- and counterproliferation which includes arms control, export controls, deterrence, counterforce, and passive defense. Such an approach will be more effective, and ease relations with Allies.

European governments, for their part, must be more ready to recognize and address new security threats and to devote resources accordingly. The “Peace Dividend” has become a dangerous myth.

Missile defense is an integral part of U.S. security policy *and* wider transatlantic relations. It is not separable from either. It needs to be addressed at all times within this broader context.

The missile defense debate should include foreign as well as domestic participants, and be expressed in terms that address an overseas audience as well as it plays to an American one.

A Theater (or Tactical) versus National (or Strategic) distinction remains as valid for the United States as other countries. Rationales for missile defense should address both threats and their targets. Active defense also needs to be policy-led and technology-enabled, rather than the other way round.

Missile defense is part of air defense. Allies understand this. Treating them separately, and talking of Air *and* Missile defense, is misleading in both tactical and strategic terms. A ballistic missile is simply a delivery system (one of many). The United States, including

the U.S. Army, should maximise the synergy among defenses against airborne threats by devising comprehensive approaches to tackle all of them.

There are sound strategic grounds for including China as a reason for deploying missile defense. Pretending otherwise will in the short term avoid diplomatic difficulties. However, the Chinese already believe they are the object of missile defense deployment, and the practical effect of that deployment, whether intended or not, will be to negate or at least inhibit China's modest strategic capability. The issue of China must be debated honestly.

Conversely, the nature and scale of the North Korean threat should be more realistically assessed so that it does not have a disproportionate effect on the timing and nature of missile defense deployment.

The missile capabilities of states in the Middle East and South Asia, including those of countries currently viewed as friends, may prove, in the light of future events, to be as powerful a reason for appropriate active defense responses as any in East Asia. Future missile defense architectures should reflect this greater geographic diversity.

Technological protectionism is as harmful as any other form of protectionism. Nor is technology transfer a one-way process. Other countries have something to offer the United States beyond basing rights and diplomatic support. Robust action must be taken to overcome current U.S. legislative and commercial barriers to effective cooperation.

Future basing arrangements for missile defense assets such as X-Band radars, satellite ground stations, and ground-based interceptors require careful handling in diplomatic and public relations terms.

Negotiations on cooperative arrangements should have realistic expectations on all sides, including the mutual benefits of missile defense and the scale of financial contributions likely to be forthcoming.

## ENDNOTES

1. Lord Bach, Minister of State for Defence Procurement "Missile Defence-UK Policy" in Jeremy Stocker and David Wiencek, eds, *Missile Defence in a New Strategic Environment*, Whitehall Paper, No. 60, London: Royal United Services Institute, 2003, p. 2.

2. James B. Steinberg, "An Elective Partnership: Salvaging Transatlantic Relations," *Survival*, Vol. 45, No. 2, Summer 2003, p. 114.

3. For a convincing, if sometimes overstated, discussion of the divergence of U.S. and European security interests and views, see Robert Kagan, *Paradise & Power: America and Europe in the New World Order*, London: Atlantic Books, 2003.

4. Martin Aguera, *ESDP and Missile Defense: European Perspectives for a More Balanced Transatlantic Partnership*, Carlisle, PA: Strategic Studies Institute, December 2001, p. 19.

5. For a very full and authoritative explanation of why America needs others, see Joseph S. Nye, *The Paradox of American Power: Why the World's Only Superpower Can't Go It Alone*, Oxford: Oxford University Press, 2002.

6. Aguera, *ESDP and Missile Defense*, p. 1.

7. Colin S. Gray, *European Perspectives on U.S. Ballistic Missile Defense*, Fairfax VA: National Institute for Public Policy, March 2002, pp. iii, 2.

8. For example, Dean A. Wilkening, *Ballistic-Missile Defence and Strategic Stability*, Adelphi Paper No. 334, London: International Institute for Strategic Studies, 2000, pp. 16-17.

9. Ivo H. Daalder and Christopher Makins, "A Consensus on Missile Defence?" *Survival*, Vol. 43, No. 3, Autumn 2001, p. 61.

10. Klaus Becher, "Missile Defence and International Statecraft," *Survival*, Vol. 43, No. 3, Autumn 2001, p. 77.

11. Philip H Gordon, "Bush, Missile Defence and the Atlantic Alliance" *Survival*, Vol. 43, No. 1, Spring 2001, p. 18.

12. Gray, *European Perspectives*, p. 14.

13. For the full history of Britain's involvement in ballistic missile defense, see the author's published Ph.D. thesis: Jeremy Stocker, *Britain & Ballistic Missile Defence 1942-2002*, London and Portland, OR: Frank Cass, 2004.

14. *Ibid*, Chapter 2.

15. *Ibid*, Chapter 4.

16. Michael Quinlan, *Thinking About Nuclear Weapons*, Whitehall Paper No. 41, London: Royal United Services Institute, 1997.

17. National Archives, AVIA 65/1869 BMD(TSC)(61)3, *Active Defence Against Strategic Missiles in the Period 1970/80*, January 18, 1961. This report was produced by the Technical Sub-Committee of the British Nuclear Deterrent Study Group, chaired by Sir Robert Powell, then the senior civilian official in the Ministry of Defence.

18. For the text of this announcement, see *Survival*, Vol. IX, No. 11, November 1967, pp. 342-346.

19. House of Commons, *Official Report, Hansard*, April 17, 1967, Cols. 78-79.

20. National Archives, PREM 13/2564 PM/67/12, January 30, 1967.

21. National Archives, PREM 13/2564, Healey to McNamara, September 15, 1967.

22. Gray, *European Perspectives*, p. 1.

23. Benson D. Adams, *Ballistic Missile Defense*, New York: American Elsevier, 1971, p. 191.

24. National Archives, FCO 46/286, Rose to Sykes, March 26, 1969.

25. Stuart Croft, *The Impact of Strategic Defences on European-American Relations in the 1990s*, Adelphi Paper No. 238, London: International Institute for Strategic Studies, Spring 1989, p. 10. Details of continuing U.S. Army BMD activities can be found in Donald Baucom, *The Origins of SDI 1944-1983*, Lawrence KA: University Press of Kansas, 1992, pp. 97-103.

26. The full text can be found at [www.fas.org/spp/starwars/offdocs/rrspch.htm](http://www.fas.org/spp/starwars/offdocs/rrspch.htm).

27. Sidney D. Drell, Philip J. Farley, and David Holloway, "Preserving the ABM Treaty: A Critique of the Reagan Strategic Defense Initiative," *International Security*, Vol. 9, No. 2, Fall 1984, p. 52.

28. Lawrence Freedman, "The Small Nuclear Powers," in Ashton B. Carter and David N Schwartz, eds., *Ballistic Missile Defense*, Washington DC: The Brookings Institute, 1984, p. 273.

29. Margaret Thatcher, *The Downing Street Years*, London: HarperCollins, 1993, p. 463.
30. *Hansard*, January 9, 1985, col. 441.
31. Sir Geoffrey Howe, "Defence and Security in the Nuclear Age" *RUSI Journal*, Vol. 130, No. 2, June 1985, p. 7.
32. Robert C Hughes, *SDI: A View from Europe*, Washington DC: National Defense University Press, December 1990, p. 43.
33. For fuller details of UK participation in SDI, see Stocker, *Britain & BMD*, Chapter 8.
34. Interview with Dr Stanley Orman, the first Director-General of the UK SDI Participation Office.
35. Gordon, "Bush, Missile Defence and the Atlantic Alliance," p. 20.
36. One comprehensive description of the NMD program can be found in David R. Tanks, *National Missile Defense: Policy Issues and Technological Capabilities*, Washington, DC: Institute for Foreign Policy Analysis, July 2000.
37. U.S. Congress, *Report of the Commission to Assess the Ballistic Missile Threat to the United States*, Washington DC, July 15, 1998.
38. Stephen Cambone, *et al.*, *European Views of National Missile Defense*, Washington, DC: The Atlantic Council of the United States, September 2000, p. v.
39. Gordon, "Bush, Missile Defence and the Atlantic Alliance," p. 27.
40. Cambone, *European Views of NMD*, p. 12.
41. Andrew Marshall, *The Independent*, August 30, 2000.
42. Remarks made at a conference on *U.S.-British Cooperation in Meeting the Global Missile Threat* held at the Reform Club, London, September 18, 2000.
43. James Fergusson, *Ballistic Missile Defence: Implications for the Alliance*, NATO Fellowship Report, Brussels: NATO Headquarters, June 2000, p. 22. The *Safeguard* ABM system was briefly operational in 1975.
44. Peter Hain, MP, quoted in the *Guardian*, March 22, 2000.
45. HC 407, House of Commons Foreign Affairs Committee, Session 1999-2000, Eighth Report, *Weapons of Mass Destruction*, London: House of Commons, July 25, 2000, p. xix.



46. Cambone, *European Views of NMD*, p. 19.

47. Foreign Secretary Robin Cook, quoted in *The Independent*, September 2, 2000.

48. The United States formally withdrew from the Treaty in June 2002.

49. HC 290-II, House of Commons Defence Committee, First Report of Session 2002-03, *Missile Defence*, Vol. II, "Joint Memorandum from the Ministry of Defence and the Foreign and Commonwealth Office," February 26, 2002, p. Ev3.

50. *Hansard*, May 4, 2000, col. 312.

51. Baroness Symons, a junior Defense Minister, Lords, *Hansard*, October 20, 2000, col. 1332.

52. Steven Andreason, "The Bush Strategic Plan," *Survival*, Vol. 43, No. 3, Autumn 2001, p. 79.

53. Aguera, *ESDP and Missile Defense*, p. 19.

54. HC 327, House of Commons Foreign Affairs Committee, Second Report of Session 2001-02, *British-US Relations*, December 11, 2001, para. 51.

55. Ministry of Defence, *Missile Defence: A Public Discussion Paper*, London: MoD, December 2002, p. 26.

56. Jack Straw, speech at King's College, University of London, February 6, 2002, [www.fco.gov.uk/text\\_only/news/speechtext.asp?5869](http://www.fco.gov.uk/text_only/news/speechtext.asp?5869).

57. *Hansard*, February 5, 2002, col. 718.

58. HC 290-I, House of Commons Defence Committee, First Report of Session 2002-03, *Missile Defence*, Vol. I, January 28, 2003, p. 14.

59. Interview for *Forbes* magazine, February 5, 2001, [www.forbes.com/2001/02/04/14/tonyblair1\\_2](http://www.forbes.com/2001/02/04/14/tonyblair1_2).

60. George W Bush, "Missile Defense Now," *The Washington Times*, May 25, 2000.

61. Jim Garamone, "It's Not 'National' or 'Theater', It's Just Missile Defense," Defense Press Service Release, March 9, 2001.

62. For example, memoranda submitted to the House of Commons Defence Committee by the Campaign Against the Arms Trade, WoMenwith Hill Peace

Group and the Campaign for Nuclear Disarmament, HC 290-II, *Missile Defence*, Vol. II, Appendices 21-23.

63. For a succinct summary of missile defense plans as they developed in the early years of the Bush administration, see International Institute for Strategic Studies, *Strategic Survey 2002/3*, Oxford: Oxford University Press for IISS, 2000, pp. 27-40.

64. Gray, *European Perspectives*, p. 14.

65. HC 327, *Memorandum from the Foreign and Commonwealth Office*, October 2001, para. 8.

66. *Hansard*, February 5, 2002, cols. 715-716.

67. HC 327, Evidence, question 62.

68. *Hansard*, July 4, 2002, col. 177W.

69. Daalder and Makins, "A Consensus on Missile Defence?" p. 61.

70. Victor A. Utgoff, "Proliferation, Missile Defence and American Ambitions," *Survival*, Vol. 44, No. 2, Summer 2002, pp. 96-98.

71. Ivo H. Daalder, "The End of Atlanticism," *Survival*, Vol. 45, No. 2, Summer 2003, p. 156.

72. Kagan, *Paradise & Power*, p. 30.

73. For fuller discussions of this point, see Francois Heisbourg, "A View From Europe," *Survival*, Vol. 43, No. 3, Autumn 2001, p. 67; John Simpson, "Implications of Missile Defence For Europe," in Robin Ranger, David Wiencek, and Jeremy Stocker, eds., *International Missile Defence? Opportunities, Challenges and Implications for Europe*, Whitehall Paper 55, London: Royal United Services Institute, 2002, pp. 26-33.

74. Remarks by Adam Ingram, a junior Defence Minister, *Hansard*, January 16, 2002, col. 140WH.

75. Gray, *European Perspectives*, pp. 4, 20.

76. Gordon, "Bush, Missile Defence and the Atlantic Alliance," p. 30.

77. For the full history of BMEWS in Britain, see the author's *Britain and Ballistic Missile Defence*, Chapter 5.

78. Cmnd 946, *Ballistic Missile Early Warning Station in the United Kingdom*, London: Her Majesty's Stationery Office, February 1960.
79. *Hansard*, February 24, 1960, cols. 48-49W.
80. *RAF Fylingdales Brief* supplied to the author, December 2000.
81. The old subsonic "V-Bombers" were replaced by four *Polaris* submarines in 1968, which in turn were replaced by four larger *Trident* submarines in the 1990s.
82. Tanks, *National Missile Defense*, Chapter 4.
83. HC 407, p. xvii.
84. *Hansard*, April 4, 2000, col. 400W.
85. Interviewed on Channel 4 News, March 21, 2000.
86. HC 290-II, Q.38, February 27, 2002.
87. HC 407, Appendix 54.
88. MoD, *Public Discussion Paper*, p. 23.
89. *Ibid*, p. 27.
90. *Hansard*, December 17, 2002, col. 46WS, written statement by Defence Secretary.
91. Nick Witney, Director-General for International Security Policy, MoD, "The UK Approach to Missile Defence" paper delivered to International Missile Defense Conference, Kyoto, Japan, June 9, 2003.
92. HC 290-1, p. 5.
93. *Hansard*, February 5, 2003, col. 12WS.
94. *Ibid.*, January 15, 2003, col. 897.
95. *Ibid.*, January 22, 2003, col. 333.
96. [www.mod.uk/linked\\_files/publications/fylingdales/update\\_report.pdf](http://www.mod.uk/linked_files/publications/fylingdales/update_report.pdf).
97. *Defense Daily*, November 5, 2003.

98. *Hansard*, December 18, 2003, col. 154WS.

99. For further details, see Stocker, *Britain and Ballistic Missile Defence*, Chapter 5.

100. HC 407, Appendix 54, Memorandum submitted by Foreign and Commonwealth Office, *U.S. National Missile Defence*, July 24, 2000.

101. Marshal of the Royal Air Force Sir Peter Harding, "Defending the Future," *RUSI Journal*, Vol. 139, No. 2, April 1994, p. 8.

102. Cited in Bhupendra Jasani, "Measuring Up a Ballistic Missile Defence Requirement for Britain" in *Brassey's Defence Yearbook 1995*, London: Brassey's, 1995, p. 59.

103. For details, see the unclassified PFS report issued by the Defence Evaluation and Research Agency, DERA, 1998, *DERA/WX9/6/173/1/3/2/2.0*.

104. Michael Portillo, speech to Belgian Royal Institute of International Affairs, October 23, 1996, in Robin Ranger, *et al.*, "Missile Defence: Options of UK/US Co-Operation" in *Global Defence Review 1997*, p. 48.

105. *Hansard*, December 4, 1997, col. 574.

106. Cm 3999, *The Strategic Defence Review and Supporting Essays*, London: The Stationery Office, July 1998, pp. 5-15.

107. Jon Day, Director of Defence Policy, "The Current UK Policy on TMD/NMD" in Robin Ranger, ed., *Theatre Missile Defence*, Bailrigg Study 1, Lancaster: Centre for Defence and International Security Studies, November 1998, p. 25.

108. Dr. Eric Grove, HC-III House of Commons Defence Committee, Session 1997-98, Eighth Report, *The Strategic Defence Review*, September 3, 1998, Appendix 17.

109. For example, a pamphlet by the then leader of the opposition Iain Duncan Smith, *A Race Against Time*, London: The Conservative Party, 2002.

110. HC 290-II, pp. Ev.1 & 3.

111. HC 290-I, p. 9.

112. Cm 6041-I, *Delivering Security in a Changing World*, London: Ministry of Defence, 2005, p. 9.

113. David Martin, "Towards an Alliance Framework For Extended Air Defence/Theatre Missile Defence," *NATO Review*, Vol. 44, No. 3, May 1996.

114. For a good summary of NATO activities to date, see David Martin, "The NATO Missile Defence Study," in Ranger, *et al.*, eds., *International Missile Defence?* pp. 82-88.

115. Richard Sokolsky, "Imagining European Missile Defence," *Survival*, Vol. 43, No. 3, Autumn 2001, p. 113.

116. Tony Ashton, "NATO's Studies of Layered Theatre Ballistic Missile Defence," *RUSI World Defence Systems*, Vol. 3, No. 3, December 2001, p. 55.

117. Martin, "NATO Missile Defence Study," p. 86.

118. Richard D. Sokolsky, "European Missile Defense: Issues and Options," *Joint Force Quarterly*, No. 29, Autumn/Winter 2001-02, p. 51.

119. <http://www.nato.int/docu/pr/2002/p02-127e.htm>.

120. Bernd Kreinbaum, "NATO and BMD," paper delivered at Royal United Services Institute conference, *Ballistic Missile Defence: What, How and When?* London, November 18-19, 2003.

121. Richard Jeffery, Director UK Missile Defence Centre, presentation to RUSI conference, *Ballistic Missile Defence*, London, November 19, 2003.

122. HC 411, House of Commons Defence Committee, First Special Report of Session 2002-2003, *Missile Defence: Government Response*, London: The Stationery Office, February 11, 2003, p. 4.

123. Bradley Graham, "U.S. Controls Hamper Foreign Role in Missile Defense," *The Washington Post*, October 19, 2003, p. A27.

124. Lieutenant General Ronald Kadish, Director, Missile Defense Agency, closing address at RUSI conference, *Missile Defence in a New Strategic Environment*, London, November 19, 2002.

125. HC290-II, p. Ev. 43.

126. *Ibid*, p. Ev. 51.

127. HC 290-I, p. 25.

128. *Hansard*, July 28, 2001 col. 135WH.

129. MoD, *Public Discussion Paper*, p. 28.

130. Peter Liddell, Chief Scientist, Missile Defence Centre, "Consequences of Missile Defence in a European Context," presentation to IQPC Ltd conference, *Missile Defence*, London, December 4-5, 2003.

131. David Mulholland, "Bucking the Trend," *Jane's Defence Weekly*, February 25, 2004, pp. 20-28.

132. Michael Rance, "Options for a European BMD System," presentation to IQPC Ltd conference, *Missile Defence*, London, December 4-5, 2003. See also Graham, "U.S. Controls."

133. HC 290-II, p. Ev.65; "Written Ministerial Statement: December 17, 2002."

134. Text available at [www.home.btclick.com/caab/soo3-0-09BASIC.htm](http://www.home.btclick.com/caab/soo3-0-09BASIC.htm). U.S. DoD/UK MoD BMD MoU.

135. HC 290-I, p. 19-20.

136. Nick Witney, "Shifting International Perspectives on Missile Defence," *RUSI Journal*, Vol. 148, No. 6, December 2003, p. 39.

137. MoD, *Public Discussion Paper*, p. 29.

138. Jeffery conference presentation, November 19, 2003.

139. For a much fuller account of the Chevaline response to the Moscow ABM system, see Stocker, *Britain & Ballistic Missile Defence*, Chapter 7.

140. Paul Roper, Director, Strategic Technologies MoD, "Technical Factors and Issues: A UK Ministry of Defence Perspective," in Ranger, *et al.*, eds., *International Missile Defence?* p. 97.

141. *Ibid.*, p. 99.

142. Personal information.

143. Nye, *The Paradox of American Power*, p. 40.

144. Aguara, *ESDP and Missile Defense*, p. 20.

145. IISS, *Strategic Survey 2002/03*, p. 40.

146. MoD, *Public Discussion Paper*, p. 30.